April 10, 2015

Delivered via e-mail: blawrence@usbr.gov

Mr. Ben Lawrence U.S. Bureau of Reclamation 1243 "N" Street Fresno, CA 93721

Subject: Comments Regarding the Draft Environmental Assessment and Finding of

No Significant Impact for the Westlands Water District Groundwater

Warren Act Contract

Dear Mr. Lawrence:

The State Water Contractors¹ (SWC) appreciate the opportunity to provide comments on the U.S. Bureau of Reclamation's (Reclamation) Draft Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) for the Westlands Water District's Groundwater Warren Act Contract (Proposed Action). As described in the EA, under the Proposed Action, Reclamation would enter into a five-year Warren Act Contract with Westlands Water District (WWD) to introduce up to 30,000 acre-feet per year of non-Central Valley Project (CVP) water into the San Luis Canal in years when the WWD CVP allocation is 20% or less. The period of introduction would be April 1 to August 31. The source of the non-CVP water would be pumped groundwater from deep groundwater wells within WWD, as well as other sources of non-CVP water by way of the Mendota Pool.

The SWC has a significant interest in any project which could affect the structural integrity of, and water quality within, the State Water Project (SWP) system, including the California Aqueduct (Aqueduct). Based on review of the EA, we are concerned with: (1) the lack of a defined process for implementation and coordination of the Proposed Action, (2) potential negative effects on SWP infrastructure, and (3) potential negative effects on SWP water quality.

Coordination and Implementation

DWR operates and maintains, under Federal contract, #14-06-200-9755 with the United States Department of the Interior Bureau of Reclamation, that portion of the California Aqueduct, Reaches 4-7, known as the San Luis Canal as a Joint-use facility

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General Manager Terry Erlewine

¹ The State Water Contractors (SWC) is a non-profit association of 27 public agencies from Northern, Central and Southern California that receive water under contract from the California State Water Project. The 27 member SWC agencies are: Alameda County Flood Control and Water Conservation District Zone 7, Alameda County Water District, Antelope Valley-East Kern Water Agency, Casitas Municipal Water District, Castaic Lake Water Agency, Central Coast Water Authority, City of Yuba City, Coachella Valley Water District, County of Kings, Crestline-Lake Arrowhead Water Agency, Desert Water Agency, Dudley Ridge Water District, Empire-West Side Irrigation District, Kern County Water Agency, Littlerock Creek Irrigation District, Metropolitan Water District of Southern California, Mojave Water Agency, Napa County Flood Control and Water Conservation District, Oak Flat Water District, Palmdale Water District, San Bernardino Valley Municipal Water District, San Gabriel Valley Municipal Water District, San Gorgonio Pass Water Agency, San Luis Obispo County Flood Control and Water Conservation District, Santa Clara Valley Water District, Solano County Water Agency, and Tulare Lake Basin Water Storage District.

Mr. Ben Lawrence April 10, 2015 Page 2

for conveyance of both SWP water and CVP water. The Warren Act Contract requirement is mandated under federal law but does not address DWR's concerns regarding its role as operator of the San Luis Canal and DWR's requirement to protect the SWP and the SWC. The Bureau must work together with DWR to make sure both the federal and state operations and federal and state contractors are protected in the implementation of the Proposed Action. It is critical that the implementation of the Proposed Action include an agreement between WWD and DWR, similar to the 2008 and 2014 Agreements, copies of which are attached to this comment letter.

As noted above, in previous years, WWD has worked directly with DWR and the SWC to develop, coordinate, and implement annual programs similar to the Proposed Action. This coordination is important to ensure SWP water supply and water quality are maintained and protected.

In 2012, DWR established a "Water Quality Policy and Implementation Process for Acceptance of Non-Project Water into the State Water Project" (DWR Aqueduct Pump-In Policy) (attached), which WWD has followed in previous years for similar one-year projects. Under the DWR Aqueduct Pump-in Policy, protocols for water quality monitoring and water quality forecasting are defined. The DWR Aqueduct Pump-In Policy also establishes a Facilitation Group to review and coordinate non-project water introduction into the California Aqueduct. Under the DWR Aqueduct Pump-in Policy, policies and protocols, including response plans, are established to ensure SWP water supply and water quality are protected. The SWC request that Reclamation and WWD coordinate with DWR under the established DWR Aqueduct Pump-In Policy.

SWP Infrastructure

The SWC is concerned with the effects of the Proposed Action on SWP infrastructure, particularly the structural integrity of the Aqueduct itself and SWP auxiliary facilities along the Aqueduct. The EA acknowledges that WWD "is in an area with historical as well as recent subsidence." Additionally, the United States Geological Survey (USGS) has monitored subsidence around the Delta Mendota Canal and has found significant and continuing subsidence and is currently studying the impacts of subsidence on the Aqueduct. (See http://ca.water.usgs.gov/projects/central-valley/delta-mendota-canalsubsidence.html.) However, the EA states that "groundwater to be conveyed under the Proposed Action is within the range of historical pumping by the district, and would be pumped regardless of whether Reclamation allowed its conveyance in federal facilities." The EA concludes that "any subsidence associated with this use of groundwater would take place regardless of Reclamation's decision." The EA does not provide an analysis or documentation to support this statement. Furthermore, the California Legislature passed historic groundwater legislation that requires groundwater managers to adopt groundwater sustainability plans that manage a groundwater basin so there are not undesirable results. (Cal. Water Code § 10735.2.) Undesirable results include "significant and unreasonable land subsidence that substantially interferes with surface land uses." (Cal. Water Code § 10721 (w)(5).) Therefore it is incorrect to assume that the pumping will occur regardless of the Proposed Action.

Contrary to what the EA states, the SWC is concerned that the Proposed Action would assist and encourage additional groundwater pumping in the WWD. Therefore, additional subsidence, which is irreversible, could potentially be caused by the Proposed Action and would compromise the structural integrity of the Aqueduct, with costly impacts to the SWP. The SWC recommend that Reclamation provide documentation that the Proposed Action would not result in increased groundwater pumping or, if increased groundwater pumping would occur due to the Proposed Action, Reclamation provide analysis and documentation of the effects of the increased groundwater pumping on subsidence in the vicinity of the Aqueduct.

Water Quality

The EA states that the groundwater pumped and conveyed under the Proposed Action "would be required to meet then-current water quality standards prior to approval for introduction to San Luis Canal." The EA does not discuss or address effects on water quality in the Aqueduct. Although the groundwater pumped and conveyed under the Proposed Action may meet "then-current" water quality standards, which are not clearly defined in the EA, there may still be a degradation in Aqueduct water quality compared with water quality conditions absent the Proposed Action. The SWC suggests that the "then-current" water quality standards be more clearly defined and a quantitative analysis be presented that demonstrates the effect of the Proposed Action on Aqueduct water quality.

Additionally, the EA identifies proposed discharge locations, but does not disclose flow rate or water quality information for those discharge locations. The SWC recommend that discharge locations have the capability to be monitored for flow rates and water quality. This information could then help inform a quantitative analysis, as described above, to demonstrate the effect of the Proposed Action on Aqueduct water quality.

In Summary

Based on these comments, the SWC believes that Reclamation's EA and FONSI for the Proposed Action do not adequately discuss, analyze, or address potential water quality or infrastructure impacts to the SWP. Additionally, Reclamation's EA and FONSI for the Proposed Action do not describe any protocol or process that would be implemented to ensure that SWP water quality and infrastructure are not adversely impacted due to implementation of the Proposed Action.

The SWC is concerned with potential costly effects to SWP water quality and irreversible effects on SWP infrastructure. Instead of implementing the Proposed Action, the SWC urge Reclamation and WWD to coordinate directly with DWR on an annual basis, as done in past years, using the defined DWR Aqueduct Pump-In Policy, to ensure that SWP water supply and water quality are maintained and protected with implementation of the Proposed Action until such time as the concerns raised above are addressed.

We appreciate the opportunity to provide input to your planning process and we look forward to receiving future information concerning the proposed project. We would be happy to meet with you to discuss any of our comments. Please contact me at terlewine@swc.org or 916-447-7357 x 203.

Sincerely,

Terry L. Erlewine General Manager

Attachments

State of California The Resources Agency DEPARTMENT OF WATER RESOURCES

AGREEMENT BETWEEN
THE DEPARTMENT OF WATER RESOURCES, OF THE STATE OF
CALIFORNIA,
AND
WESTLANDS WATER DISTRICT
FOR
INTRODUCTION and CONVEYANCE OF LOCAL GROUNDWATER
IN THE CALIFORNIA AQUEDUCT

SWPAO #08052

THIS AGREEMENT is made and entered into as of the August day of August , 2008 pursuant to the provisions of the California Water Resources Development Bond Act and other applicable laws of the State of California, between the Department of Water Resources (DWR) of the State of California and Westlands Water District (WWD), a water district, duly organized, existing and acting pursuant to the laws of the State of California. This Agreement may refer to DWR or WWD individually by name, as "Party" or collectively as "Parties".

Recitals

- A. DWR operates and maintains the State Water Resources Development System pursuant to the laws of the State of California, involving the development and conveyance of water supplies to public agencies and water districts throughout the State of California.
- B. DWR operates and maintains, under Federal contract #14-06-200-9755 with the United States Department of the Interior Bureau of Reclamation, that portion of the California Aqueduct, Reaches 4-7, known as the San Luis Canal (Aqueduct) as a Joint-use facility for conveyance of State Water Project (SWP) water and Central Valley Project (CVP) water.
- C. Due to critically dry hydrologic conditions in 2008, court ordered restrictions on pumping from the Delta, a reduction in WWD's 2008 CVP water allocations, and rationing of all CVP water south of the Delta, June through August 2008, WWD has a compelling need to transfer its local groundwater supply for use between farmers and landowners within its service area.
- D. This Agreement has been developed in response to the Governor's Proclamation "State of Emergency-Central Valley Region" issued on June 12, 2008.
- E. WWD has committed that they will not propose similar programs in response to future water supply shortage conditions, unless those programs are accompanied by completed CEQA documentation, comply with DWR pump-in policies and demonstrate that economic effects resulting from subsidence associated with the increased groundwater pumping or any water quality degradation for SWP contractors are either fully mitigated or compensation is provided.
- F. WWD has requested DWR to allow WWD to pump into the Aqueduct through DWR approved turn-in structures, up to 20,000 acre-feet of local groundwater originating from wells in the WWD service area, Reaches 4-7, and for DWR to provide conveyance and delivery of this water to WWD turnouts in Reaches 4-7 for use by WWD on agricultural lands only within its service area.
- G. WWD has agreed to provide to DWR, as mitigation to the SWP, water previously acquired by WWD, in an amount equivalent to 10 percent of the total amount of local groundwater pumped into the Aqueduct from WWD. The mitigation water will be made available to the SWP in O'Neill Forebay.

AGREEMENT

DWR agrees to accept, convey, and deliver for WWD up to 20,000 acre-feet of local groundwater within WWD's service area under the following terms and conditions:

1. Pump-in, Conveyance and Delivery of Local Groundwater

- a. DWR will allow pump-in of WWD local groundwater from individual source wells approved by DWR into the Aqueduct, Reaches 4-7 during the period of June 16 through September 30, 2008.
- b. All source wells selected by WWD to provide local groundwater to be pumped into the Aqueduct must be approved by DWR prior to any actual pump-in of local groundwater into the Aqueduct.
- c. DWR will allow and provide conveyance and delivery of WWD local groundwater to turnouts located within Aqueduct Reaches 4-7 during the period of June 16 through September 30, 2008.
- d. DWR shall have no obligation to return any local groundwater introduced into the Aqueduct under this program that does not meet DWR's requirements for water quality or documented measurement.
- e. Any local groundwater introduced into the Aqueduct by WWD which is not accepted for delivery by WWD by September 30, 2008 shall be considered SWP water and will not be available for delivery to WWD.

2. Services Provided

WWD shall assure timely access for DWR personnel to conduct any of the following activities within WWD's service area during the term of this Agreement:

- a. Verification of metering calibration standards and requirements for meters located at the point of entry into the Aqueduct and at the point of delivery out of the Aqueduct.
- b. Collecting of water samples from source wells and at the point of pump-in to the Aqueduct for testing of water quality.
- c. Any other activities deemed necessary by DWR to comply with the terms of this Agreement.

3. Water Quality

a. Prior to any pump-in approval being granted to WWD by DWR, WWD shall be responsible for water, from each source well pumping local groundwater, to be tested by a certified laboratory and no water shall be pumped into the Aqueduct that exceeds the Maximum Contaminant Levels (MCL) standards or fails to meet the acceptable concentrations of MCL established for the six constituents of concern (COC):

Arsenic

0.01 mg/L

Boron

2.0 mg/L

Bromide

no proposed MCL, to be reviewed on a

case by case basis by DWR

Nitrates

45 ma/L

Sulfates

600 ma/L

Total Dissolved Solids 1100 mg/L

- b. DWR staff will conduct routine water quality measurements of the Aqueduct, upstream and downstream of the WWD service area, from Check 13 through Check 21. The results of DWR water quality testing will be available on the DWR Water Data Library website within 2 weeks of sampling.
- c. If any water from a source well providing local groundwater is tested and found to be at, or within, 10 percent of the acceptable MCL concentration, DWR shall resample and test that specific well water again. If a second test of groundwater from an individual source well is found not to meet the acceptable MCL concentration, WWD will cause the pump to discontinue pumping water into the Aqueduct immediately and that pump will not be allowed to resume pumping water into the Aqueduct.
- d. All water from each source well must also comply with the California Code of Regulations, Title 22 Water Quality Analysis requirements, as modified for this Agreement, in order to continue to provide local groundwater pumping into the Aqueduct under this Agreement. Within 2 weeks of well start-up, a modified Title 22 Water Quality Analysis shall be provided to DWR. Any source well found not to meet the modified Title 22 primary requirements shall be shut down immediately. During the term of this Agreement, if any modified T22 secondary metal MCL is exceeded in the Aqueduct at Check 21, any pump-in well exceeding the T22 secondary metal MCL shall immediately be shut down by WWD.
- e. DWR's water quality testing results will govern over laboratory results provided by WWD. WWD may request that DWR resample and test a given source well for the COC.

4. Water Operations

- a. WWD shall receive pump-in approval from DWR prior to the introduction of local groundwater into the Aqueduct. WWD shall provide DWR with daily and weekly schedules which shall identify the approved source wells flow rates, locations of pump-in by Aqueduct Mile Post and delivery of local groundwater by Reach.
- b. DWR shall have no obligation to return to WWD any local groundwater pumped into the Aqueduct under this Agreement that does not meet DWR's requirements for water quality or measurement.
- c. Any local groundwater pumped into the Aqueduct by WWD which is not accepted for delivery by WWD by September 30, 2008 shall be considered SWP water.
- d. No pump-in of WWD local groundwater shall be permitted by DWR after September 30, 2008.
- e. DWR will not allow any transfer or exchange of SWP water for local groundwater and will not provide for storage of local groundwater for WWD under this Agreement.
- f. DWR may, upon notice orally by telephone, electronic mail or notice by facsimile transmission and confirmed in writing require WWD to stop the pump-in of local groundwater into the Aqueduct immediately, if, in the judgment of DWR, its continuance could result in disruption of or damage to the SWP, including but not limited to unacceptable degradation of water quality.

5. Water Accounting

a. At the end of each month from June 16, 2008 through September 30, 2008 during the pump-in and delivery period of local groundwater within Reaches 4-7, WWD shall submit a Water Accounting Statement (WAS) to the following DWR staff at San Luis Field Division and the State Water Project Analysis Office:

Mr. Mandeep S. Bling Supervising HEP Utility Engineer Department of Water Resources San Luis Field Division 31770 Gonzaga Road Gustine, California 95322 Office Phone: (209) 827-5110

Fax: (209) 827-0846

E-Mail: bling@water.ca.gov

Ms. Carol L. White Research Analyst II Department of Water Resources State Water Project Analysis Office Post Office Box 942836 Sacramento, California 94236-0001 Office Phone: (916) 653-6600

Fax: (916) 653-9628

E-Mail: cwhite@water.ca.gov

- b. The WAS will provide documentation to DWR of the total amount of WWD's local groundwater pumped into the Aqueduct within each reach, all deliveries to turnouts by reach, and include conveyance losses calculated at 2 percent.
- c. Any differences between WWD and DWR related to water accounting shall be immediately reconciled and settled monthly. DWR will determine the final water deliveries by reach.
- d. All WWD local groundwater, total pump-in and total deliveries, and conveyance losses must balance to zero by the end of each month.

6. No Impacts to State Water Project

- a. DWR shall accept and convey WWD local groundwater inflow in accordance with a schedule approved by DWR, and at times, amounts, and locations consistent with the overall delivery capability of the SWP.
- b. WWD agrees that DWR will have sole determination of whether conveyance of the groundwater adversely affects SWP operations, including but not limited to, SWP approved allocations, water storage and deliveries, compliance with environmental regulations and water rights permits, flood control, or other SWP purposes.
- c. WWD shall be responsible, as determined by DWR, for any adverse impacts to the SWP or its long-term water contractors, including but not limited to damages to the Aqueduct from subsidence and water quality impacts that may result from the local groundwater pumping into the Aqueduct or conveyance of local groundwater to turnouts within Reaches 4-7.

7. California Environmental Quality Act Exemption

a. WWD, as lead agency, will be required to provide CEQA compliance prior to any request to DWR for any future pump-in program beyond December 31, 2008.

8. Water Quality Mitigation

a. As soon as operationally possible after the low point of storage in San Luis Reservoir has been determined for 2008 by DWR and Reclamation, but no later than November 1, 2008, WWD shall agree to provide mitigation to the SWP for water quality impacts. WWD shall make available to the SWP, water previously acquired from KCWA as an in-lieu exchange of purchased Kern River water under separate agreement with WWD, in an amount equivalent to 10 percent of the total pump-in amount of WWD's local groundwater documented by DWR under this Agreement. Because this Agreement and the 10 percent mitigation rate are a response to a unique, emergency situation, this mitigation shall not be a precedent in responding to similar impacts in future situations.

- b. WWD shall agree to make SWP mitigation water available to DWR for SWP supply at O'Neill Forebay on a mutually agreeable operations schedule.
- c. Mitigation water as described in Articles 8.a. and 8.b. shall be provided to the SWP regardless of the amount of local groundwater delivered to WWD under the terms of this Agreement.
- d. WWD shall be responsible for complying with all applicable laws and regulations including the Federal Endangered Species Act and the California Endangered Species Act and for securing any required consents, permits, reports, and orders to allow DWR to facilitate the return of mitigation water to the SWP.

9. Charges

WWD shall pay DWR for all services provided by DWR related to this Agreement, including:

- a. A one-time Agreement Preparation Fee of \$10,000 to cover DWR's costs for the development, preparation and execution of this Agreement;
- b. A Monthly Administrative Fee of \$700 to cover DWR's costs to administer the Agreement, maintain records, and prepare monthly billings. This fee shall be charged beginning in the month when DWR first accepts local groundwater into the Aqueduct and will be charged each month during pump-in, conveyance or delivery of local groundwater to WWD and until all mitigation water has been accepted by DWR, or this Agreement is terminated.
- c. WWD agrees to pay direct costs incurred by DWR as a result of providing services under this Agreement which otherwise would not have been performed in absence of this Agreement. These costs include, but are not limited to water quality testing, meter calibration, water measurements, and personnel costs of staff time and travel.
- d. A Use-of Facilities fee of \$5.61 per acre-foot for conveyance of local groundwater to turnouts in Reaches 4-7 of the Aqueduct.
- e. Any other costs identified as reasonably incurred by DWR for providing services to WWD under this Agreement.

10. Billings and Payments

- a. Upon execution of this Agreement, DWR shall bill WWD the \$10,000 Agreement Preparation Fee under Article 9.a.
- b. DWR shall bill WWD for the \$700 monthly administrative fee as applicable under Article 9.b.
- c. DWR shall bill WWD for the direct costs of DWR personnel to provide services under Article 9.c. when costs are determined by DWR.
- d. DWR shall bill WWD for the Aqueduct Use-of-Facilities charge under Article 9.d. after deliveries have been confirmed by DWR.
- e. All payments shall be due within 30 days after the date of DWR's invoice.
- f. Interest shall be charged for all delinquent payments. WWD shall pay to DWR accrued interest on all overdue payments at the rate of 1 percent per month from the due date to the date of payment.
- g.

 All invoices billed under this Agreement should be mailed to:

Ms. Charlotte Dahl Director of Finance & Administration Westlands Water District Post Office Box 6056 Fresno, California 93703-6056 Office phone: (559) 224-1523

11. Liability

- a. DWR shall not be responsible for any use, effects, or disposal of WWD's local groundwater from source wells prior to introduction into the Aqueduct or after the water passes through WWD's turnouts in Reaches 4-7 of the California Aqueduct. Responsibility under the terms of this Agreement shifts from DWR to WWD when the local groundwater passes through WWD's turnouts.
- b. WWD agrees to defend and hold DWR, its officers and employees, jointly or severally, harmless from any direct or indirect loss, liability, lawsuit, cause of action, judgment or claim, and shall indemnify DWR, its officers and employees, jointly or severally, for all lawsuits, costs, damages, judgments, attorneys fees, and liabilities that DWR, its officers and employees incur as result of DWR providing services to WWD under this Agreement, except to the extent resulting from the sole negligence or willful misconduct of DWR.

- c. If DWR is precluded in whole or in part from accepting or delivering local groundwater from or to WWD because of uncontrollable forces, then DWR is relieved from the obligation to deliver the water to the extent it is reasonably unable to complete the obligation due to the uncontrollable force. Uncontrollable forces shall include, but are not limited to earthquakes, fires, tornadoes, floods, and other natural or human caused disasters.
- d. The performance of the parties to this Agreement is contingent upon approval of all governmental agencies with jurisdiction over approval of this Agreement, including without limitation any necessary compliance with applicable environmental laws. If unforeseen conditions prohibit completion of deliveries herein, after partial deliveries are made hereunder, this Agreement will be treated as though rescinded except for responsibilities for liabilities and water already delivered. Unforeseen conditions include, but are not limited to, failure of approvals or withdrawal of approval by any governmental agency with jurisdiction over this Agreement or administrative order with respect thereto.
- e. WWD shall not be entitled to recover any costs, including, but not limited to any charges billed under Article 10 of this Agreement, DWR verification of water accounting costs, or Use-of-Facilities fees paid for conveyance of local groundwater if uncontrollable forces preclude DWR from delivering the local groundwater as described in this Agreement, or this Agreement is rescinded under Article 11.d., or terminated for good cause under Article 12.

12. <u>Term</u>

This Agreement shall be effective from the date when the last Party signs this agreement and shall remain in effect until whichever occurs later: December 31, 2008, or upon final payment to DWR by WWD of all costs attributable to this Agreement including liabilities.

- a. Either party may terminate the Agreement, as set forth below, for good cause. In addition, upon notice to WWD, DWR may terminate this Agreement if the local groundwater pumped into the California Aqueduct does not meet the water quality criteria provided in Article 3 and Attachment 1 or metering standards as required by DWR.
- b. If this Agreement is terminated, WWD shall not be relieved of its obligation to pay any costs incurred under this Agreement nor for payment for liabilities related to services provided by DWR prior to the time of termination.
- c. DWR shall be obligated to return any local groundwater that has been pumped into the Aqueduct and meets the metering and water quality criteria provided under Article 3 and Attachment 1.

Before terminating this Agreement, either party shall provide the other with the d. specific ground(s) on which it wishes to terminate the Agreement. The party wishing to terminate this Agreement shall provide the other party with a reasonable opportunity to adjust or correct any problems that may have arisen in the implementation of this Agreement. Termination may only take place 5 days after written notice has been provided to the other party unless termination is based on Articles 3, 4.f., or 6 of this Agreement in which case those Articles shall control.

13. **Notices**

All communications or notices in connection with this Agreement shall be in writing and either hand-delivered or sent by United States first class mail, postage prepaid, facsimile, or electronic mail followed by written notice sent by U.S. mail, and addressed as follows to the appropriate recipient:

Mr. Robert B. Cooke, Chief State Water Project Analysis Office Department of Water Resources Post Office Box 942836 Sacramento, California 94236-0001 Office Phone: (916) 653-4313

Fax: (916) 653-9628

E-Mail: cooke@water.ca.gov

Mr. Mandeep S. Bling Supervising HEP Utility Engineer Department of Water Resources San Luis Field Division 31770 Gonzaga Road Gustine, California 95322 Office Phone: (209) 827-5110

Fax: (209) 827-0846

E-Mail: bling@water.ca.gov

Mr. Dave Ciapponi **Deputy General Manager** Westlands Water District Post Office Box 6056 Fresno, California 93703-6056 Office Phone: (559) 241-6202

Fax: (559) 241-6277

E-Mail: dciapponi@westlandswater.org

Mr. Russ Freeman Supervisor of Resources Westlands Water District P. O. Box 6056 Fresno, California 93703-6056 Office Phone: (559) 241-6241

Fax: (559) 241-6277

E-Mail: rfreeman@westlandswater.org

14. No Precedent

This Agreement is a response to a unique situation, and the parties specifically understand, and agree that this Agreement shall not be considered as a precedent for any DWR agreements or activities of a similar nature in the future.

15. Signature Clause

The signatories represent that they have appropriate authorization to enter into this "Agreement for Introduction and Conveyance of Local Groundwater in the California Aqueduct" on behalf of the Party for whom they sign. If WWD requires special written authorization from its Board of Directors, WWD shall deliver to DWR a copy of its Board of Directors resolution and/or other documentation authorizing its signature.

16. Execution in Counterpart

The Parties may execute this Agreement in counterpart. The Parties agree to accept facsimile or PDF (Portable Document Format) signatures as original signatures. The Agreement shall take effect as soon as both Parties have signed.

Immediately after execution, WWD shall transmit a copy of the executed Agreement and any required Board approvals by facsimile or email to Robert B. Cooke, Chief, State Water Project Analysis Office at (916) 653-9628 or cooke@water.ca.gov and to other necessary contacts as listed in Article 13 (Notices).

IN WITNESS WHEREOF, the Parties hereto have entered into this Agreement for Introduction and Conveyance of Local Water in the California Aqueduct.

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	Approved as to legal form and sufficiency	STATE OF CALIFORNIA DEPARTMENT OF WATER RESOURCES
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	Chief Counsel DEPARTMENT OF WATER RESOURCES	Raphael A. Torres Deputy Director
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Title

6/8/2008

ATTACHMENT 1

CALIFORNIA DEPARTMENT OF WATER RESOURCES WATER QUALITY STANDARDS FOR ACCEPTANCE OF WESTLANDS WATER DISTRICT GROUNDWATER INTO THE SWP

Constituent		Units		Maximum Contaminant Level		Source	
Primary			•		`		
Aluminum		mg/L		1		(1)	
Antimony.	100 T 3	mg/L		0.006		(1)	
Arsenic		mg/L		0.01		(12)	
Barium		mg/L		1		(1)	
Bromide		mg/L		N/A		(13)	
Beryllium		mg/L		0.004		(1)	
Boron		mg/L		2.0		(13)	
Cadmium		mg/L		0.005		(1)	
Chromium (total)		mg/L		0.05		(1)	
Lead		mg/L		0.015		<u>(5)</u>	
Mercury (inorganic)		mg/L		0.002		(1)	
Nickel		mg/L		0.1		(1)	
Nitrates (as NO3)		mg/L		45		(1)	
Selenium		mg/L		0.05		(1)	
Sulfate *		mg/L		600		(13)	
Thallium		mg/L		0.002		(1)	
Total Dissolved Solids *		mg/L	43	1,100		(13)	

^{*} Note: Sulfate and Total Dissolved Solids are treated as primary Constituents of Concern in this agreement, as stated in Article 3.d.

Secondary

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Chloride		mg/L		250		(4)	
Copper		mg/L		1		(3)	
Iron		mg/L		0.3		(3)	
Manganese		mg/L		0.05		(3)	
Molybdenum		mg/L		0.01		(10)	
Silver		mg/L		0.1		(3)	(#1741) 1411-1
Sodium	# #	mg/L	Control of Light Phys Garring	· 69		(9)	
Specific Conductance		μS/cm		1,600		(4)	
Zinc		mg/L		5	1	(3)	4
Total Organic Carbon b	y Com	bustion					
тос		mg/L as C		N/A	### ###	(11)	

Constituent		Units		Maximum Contaminant Level		Source	·	
Organic Chemicals								
Aldicarb	1.0	mg/L		0.003		(14)		
Atrazine		mg/L		0.001		(2)		
Carbaryl		mg/L	5 / 17 (5 / 17 (12 / 12)	0.4		(16)	j	
Carbofuran		mg/L		0.018		(2)	g v	
Chlordane		mg/L		0.0001		(2)		
Chlorpyrifos		μg/L		0.025		(8)		
2, 4-D		mg/L		0.07		(2)		
Diazinon		μg/L		0.16	11.5	(8)	And Fini	
Dibromochloropane (DBCP)		mg/L		0.0002		(2)		
Diquat		mg/L		0.02		(2)		
Endothall		mg/L		0.1		(2)		
Endrin		mg/L		0.002		(2)		
Ethylene Dibromide (EDB)		mg/L		0.00005		(2)		
Heptachlor		mg/L		0.00001		(2)		
Heptachlor Epoxide		mg/L		0.00001		(2)		
Lindane		mg/L		0.0002		(2)		
Methiocarb		mg/L		N/A				
Methomyl		mg/L		0.2	2 - 12 - 12 - 12 - 12 - 12 - 12 - 12 -	(15)		
Methoxychlor		mg/L		0.03		(2)		
Oxamyl		mg/L		0.05		(2)		
2, 4, 5-TP (Silvex)		mg/Ĺ		0.05		(2)		
Simazine		mg/L		0.004		(2)		
Toxaphene		mg/L		0.003		.(2)		

Sources:

(A) Title 22. The Domestic Water Quality and Monitoring Regulations specified by the State of California Health and Safety Code (Sections 60001-64690.80), as amended March 9, 2008.

(1) Title 22. Table 64431-A

(4) Title 22. Table 64449-B

(2) Title 22. Table 64444-A

(5) Title 22. Section 64678 (d)

(3) Title 22. Table 64449-A

(B) California Regional Water Quality Control Board, Central Valley Region, Fourth Edition of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins.

(7) Basin Plan, Table III-1

(8) Basin Plan, Table III-2A

- (C) Ayers, R. S. and D. W. Westcot, *Water Quality for Agriculture*, Food and Agriculture Organization of the United Nations Irrigation and Drainage Paper No. 29, Rev. 1, Rome (1985).
 - (9) Ayers, Table 1

(10) Ayers, Table 21

- (D) Total Organic Carbon in Water EPA Method 415.1 (Combustion) (11) EPA 415.1 (T) Ox
- (E) On January 22, 2001 EPA adopted a new standard for arsenic in drinking water at 10 parts per billion (ppb), replacing the old standard of 50 ppb. The rule became effective on February 22, 2002. The date by which systems must comply with the new 10 ppb standard is January 23, 2006.

(12) 40 CFR 141.62(b)(16)

(F) State of California, The Resources Agency Department Of Water Resources Agreement Among The Department Of Water Resources, State Of California, Bureau Of Reclamation, U.S. Department Of Interior And Westlands Water District for Introduction and Conveyance Of Local Groundwater In The California Aqueduct.

(13) SWPAO #08-052

- (G) U.S. EPA Water Quality limits for Constituents and Parameters, (14) U.S. EPA, Maximum Contaminant Levels;
 - (15) Drinking Water Health Advisories or Suggested No-Adverse-Response Levels (SNARLs) for toxicity other than cancer risk. August 2007 updates.
 - (16) RSD5, risk specific dose at 10E-5 μg/L.

State of California The Resources Agency DEPARTMENT OF WATER RESOURCES

AGREEMENT BETWEEN
THE DEPARTMENT OF WATER RESOURCES OF THE STATE OF CALIFORNIA, AND
WESTLANDS WATER DISTRICT
FOR
INTRODUCTION AND CONVEYANCE OF LOCAL GROUNDWATER
IN THE CALIFORNIA AQUEDUCT

SWPAO #14010

Recitals

- A. DWR operates and maintains the State Water Resources Development System pursuant to the laws of the State of California, involving the development and conveyance of water supplies to public agencies and water districts throughout the State of California.
- B. DWR operates and maintains, under Federal contract #14-06-200-9755 with the United States Department of the Interior Bureau of Reclamation, a portion of the California Aqueduct, Reaches 4-7, known as the San Luis Canal (hereafter referred to as "Aqueduct"), as a Joint-use facility for conveyance of State Water Project (SWP) water and Central Valley Project (CVP) water.
- C. Due to critically dry hydrologic conditions in 2014, continuing court ordered restrictions on pumping from the Delta, and a 0% 2014-2015 CVP water allocation, WWD has an urgent and compelling need to transfer its local groundwater supply for use among farmers and landowners within its service area.
- D. On January 17, 2014, the Governor issued a Proclamation entitled "A Proclamation of a State of Emergency" and on April 25, 2014, the Governor issued "A Proclamation of a Continued State of Emergency."
- E. WWD intends to pump its groundwater into the Aqueduct and utilize the Aqueduct as an additional way to transport the groundwater between lands with an abundance of groundwater to lands lacking water supplies, all within WWD's service area from June through October in 2014.
- F. WWD has requested DWR's approval to allow WWD to pump into the Aqueduct through DWR approved turn-in structures up to 30,000 acre-feet of local groundwater originating from wells in the WWD service area in Reaches 4-7; and for DWR to provide conveyance and delivery of this water to WWD's turnouts in Reaches 4-7, for use by WWD on agricultural lands only within its service area.
- G. WWD agrees to provide to DWR 13.3 percent (13.3%) of the total amount of its local groundwater pumped into the Aqueduct under this Agreement as mitigation to the SWP.
- H. WWD filed a Notice of Exemption (NOE) on June 12, 2014 in Fresno County and Kings County. The NOE is based on Section 21080(b)(3) of the California Environmental Quality Act (CEQA) and Section 15269(a) of the CEQA Guidelines.

AGREEMENT

DWR agrees to accept, convey, and deliver for WWD up to 30,000 acre-feet of WWD's local groundwater within WWD's service area in Reaches 4-7 of the California Aqueduct, subject to the following terms and conditions:

1. TERM

- a. This Agreement shall be effective upon execution by all parties and shall terminate on October 31, 2014 or upon final payment to DWR by WWD of all costs attributable to this Agreement, whichever occurs later. However, the liability, hold harmless and indemnification obligations in the Agreement shall remain in effect until October 31, 2018 or until any claim or litigation concerning this Agreement asserted to DWR or WWD as of October 31, 2018 is finally resolved, whichever occurs later.
- b. Either party may terminate the Agreement, as set forth below, for good cause. In addition, upon notice to WWD, DWR may terminate this Agreement if the local groundwater pumped into the California Aqueduct under this Agreement does not meet the water quality criteria provided in Article 4 and Attachment 1 of this Agreement or the metering standards as required by DWR.
- c. If this Agreement is terminated, WWD shall not be relieved of its obligation to pay any costs incurred under this Agreement or for payment for liabilities related to services provided by DWR prior to the time of termination.
- d. In the event this Agreement is terminated, DWR shall return to WWD any local groundwater that has been pumped into the Aqueduct and which meets the metering and water quality criteria provided under Article 4 and Attachment 1 of this Agreement.
- e. Before terminating this Agreement, either party shall provide the other with the specific ground(s) on which it wishes to terminate the Agreement. The party wishing to terminate this Agreement shall provide the other party with a reasonable opportunity to adjust or correct any problems that may have arisen in the implementation of this Agreement. Termination may only take place five days after written notice has been provided to the other party unless termination is based on Articles 3.g., 4, or 7 of this Agreement in which case those Articles shall control.

UNIQUENESS OF AGREEMENT

This Agreement is a response to a unique situation, and the parties specifically understand and agree that this Agreement shall not be considered as a precedent for future agreements or DWR activities.

3. GENERAL PROVISIONS FOR WWD's PUMP-IN AND CONVEYANCE

- a. DWR will allow the introduction of up to 30,000 acre-feet of WWD's local groundwater from individual source wells approved by DWR into the Aqueduct in Reaches 4-7 from June through October 31, 2014.
- b. All source wells selected by WWD to provide local groundwater to be pumped into the Aqueduct must be approved by DWR prior to any actual pump-in of local groundwater into the Aqueduct.
- c. DWR shall have no obligation to return any WWD's local groundwater introduced into the Aqueduct under this Agreement that does not meet DWR's requirements for water quality or documented measurement.
- d. Any local groundwater introduced into the Aqueduct by WWD which WWD does not accept for delivery by October 31, 2014 shall be considered SWP water and will not be available for delivery to WWD.
- e. For any WWD's local groundwater pumped into the Aqueduct under this Agreement, two percent (2%) will be used to account for canal losses due to evaporation and seepage.
- f. WWD agrees to provide to DWR 13.3% of the total amount of its local groundwater pumped into the Aqueduct under this Agreement as mitigation to the SWP. WWD will take 84.7% of the total amount of local groundwater pumped into the Aqueduct under this Agreement.
- g. DWR may, upon notice by phone or electronic email, require WWD to stop the pump-in of its local groundwater into the Aqueduct immediately, if, in the judgment of DWR, its continuance results in the disruption of or damage to the SWP, including but not limited to unacceptable degradation of water quality.
- h. WWD shall assure timely access for DWR personnel to conduct any of the following activities within WWD's service area during the term of this Agreement:

- (i) Verification of metering calibration standards and requirements for meters located at the point of entry into the Aqueduct and at the point of delivery out of the Aqueduct.
- (ii) Collection of water samples from source wells and at the point of pump-in to the Aqueduct for testing of water quality.
- (iii) Any other activities deemed necessary by DWR to comply with the terms of this Agreement.

4. WATER QUALITY

- a. WWD shall conduct collection of water samples from source wells that will be used to pump-in local groundwater into the Aqueduct for testing of water quality. Prior to DWR granting any pump-in approval to WWD, WWD shall be responsible for water sampling and testing of each source well pumping local groundwater by a certified chemical analysis laboratory (State Water Resources Control Board Environmental Laboratory Accreditation Program (formerly the California Department of Public Health ELAP)).
- b. DWR shall approve all source wells proposed to participate in the groundwater pump-in program prior to discharging any groundwater in the Aqueduct. No water shall be pumped into the Aqueduct that exceeds the T-22 Maximum Contaminant Levels (T-22 MCL) standards (listed at http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalinformation.aspx) or fails to meet the acceptable concentrations of Modified T-22 MCL established for twelve constituents of concern (COC) listed in the following table:

Constituent of Concerns	MCL
Arsenic	0.01 ppm (mg/L)
Bromide	No proposed MCL, to be reviewed on a case by case basis by DWR
Total Chromium	0.05 ppm
Chloride	250 ppm
Nitrate (as NO ₃)	45 ppm
Sulfate	600 ppm
Total Dissolved Solids (TDS)	1100
Total organic carbon	None
Conductivity	None
Hexavalent chromium	0.010 mg/L
Gross alpha	15 pC/L
Uranium	20 pC/L

- c. In addition to the one time Title 22 sampling required before pump-in, WWD shall sample for COC's from each well weekly for the first four weeks to determine that the water quality of the discharge is consistent, predictable, and reliable as stated in the "Department of Water Resources Water Quality Policy and Implementation Process for Acceptance of Non-Project Water into the State Water Project," dated October 13, 2012 or a later date if modified by DWR. WWD shall perform this sampling quarterly after the first four weeks.
- d. DWR staff will conduct routine water quality measurements of the Aqueduct, upstream and downstream of the WWD service area, from Check 13 through Check 21. The results of DWR water quality testing will be distributed to interested parties as well as posting to the Water Data Library website (http://www.water.ca.gov/waterdatalibrary/).
- e. Any source well found not to meet the T-22 MCL or the acceptable concentration of Modified T-22 MCL established for seven COC's shall stop pumping immediately. DWR will notify WWD either by phone or electronic mail to stop the pump-in of its local groundwater into the Aqueduct immediately, as determined by DWR, if the source well that provides local groundwater into the Aqueduct failed to meet the T-22 requirements or the acceptable concentration of Modified T-22 MCL established for seven COC's.

- f. DWR may identify additional COC's upon review of the T-22 data and any additional COC's shall be added to the monitoring as determined by DWR.
- g. DWR reserves the right to collect water samples for water quality testing for the COC from any WWD's source well or at any point of water entry into the Aqueduct.
- h. If any water from a source well providing WWD's local groundwater is tested by DWR and found to exceed the identified MCL's, DWR shall order that source well to stop pumping immediately, that source well will not be allowed to resume pumping, and WWD will not receive credit for that water introduced into the Aqueduct.
- DWR's water quality testing results will govern over laboratory results provided by WWD. WWD may request that DWR resample and test a given source well for the COC's.
- j. WWD shall provide to DWR for review the followings:
 - (i) The net flow weighted groundwater projection prior to a well pumping.
 - (ii) Well analysis data from each well tested for COC's within five days of sampling.
 - (iii) The T-22 Water Quality Analyses results within 30 days of the analysis.
- k. WWD shall identify anticipated water quality changes within the San Luis Canal (SLC) by using a daily model and providing results to DWR on a daily basis. WWD shall monitor water quality changes daily at Check 13 and 21, and shall update the model daily to reflect changes in the upstream water quality of the SLC, changes in demands, and pump-ins in Reaches 4 through 7. WWD shall provide DWR with a day-to-day prediction of downstream water quality.
- If the TDS concentration at Check 21 rises to within 90% of the maximum concentration established by DWR, then WWD shall initiate a consultation process with DWR to evaluate the cause of the increase and initiate shutdown procedures of the pump-in-program. WWD shall run model simulations to quantify anticipated improvements in the SLC water quality resulting from shutdown. The participating wells with the highest TDS concentrations will be targeted first, continuing to the wells with the lowest concentrations until canal water quality stabilizes or improves. When TDS

- concentrations at Check 21 improve, wells will be brought on-line to commence pumping only after approval of the startup with DWR.
- m. WWD shall direct all water quality testing data, test results, or questions regarding water quality issues related to this Agreement to:

Barry Montoya
Water Quality Section
Environmental Assessment Branch
Division of Operation & Maintenance
CA Department of Water Resources
(916) 653-4383 office
(916) 653-8250 fax

E-Mail: bmontoya@water.ca.gov

WATER OPERATIONS

- a. WWD shall request and must receive approval from DWR prior to the introduction of any local groundwater into the Aqueduct under this Agreement.
- WWD shall provide DWR with daily and weekly schedules which shall identify the approved source wells flow rates, locations of pump-in by Aqueduct Mile Post, and delivery of local groundwater by Reach.
- DWR will not allow any transfer or exchange of SWP water for local groundwater and will not provide for storage of local groundwater for WWD under this Agreement.

WATER DELIVERY RECORDS

a. DWR will maintain monthly records for the pump-in, conveyance and delivery of WWD's local groundwater under this Agreement. WWD shall certify to DWR's State Water Project Analysis Office the total amount of local groundwater pumped into the Aqueduct within each reach and all deliveries to turnouts by reach by the end of each month under the term of this Agreement. WWD shall also submit water accounting related to this Agreement to the following staff at San Luis Field Division. Mr. Mandeep S. Bling Supervising HEP Utility Engineer Department of Water Resources San Luis Field Division 31770 Gonzaga Road Gustine, California 95322 Office Phone: (209) 827-5110

Fax: (209) 827-0846

E-Mail: bling@water.ca.gov

- b. WWD and DWR shall immediately reconcile water accounting under this
 Agreement and settled the water accounting monthly. DWR will determine
 the final water deliveries by reach under this Agreement.
- All WWD local groundwater, total pump-in and total deliveries, conveyance losses and mitigation water, must balance to zero by the end of each month.

NO IMPACTS

- a. This Agreement shall not be administered or interpreted in any way that would cause adverse impacts to SWP approved Table A water or to any other SWP approved water allocations, water deliveries, or SWP operations or facilities. WWD shall be responsible, as determined by DWR, for any adverse impacts that may result from all services provided by DWR under this Agreement.
- b. WWD agrees that DWR will have sole determination of whether conveyance of the groundwater adversely affects SWP operations, including but not limited to, SWP approved allocations, water storage and deliveries, compliance with environmental regulations and water rights permits, flood control, or other SWP purposes.
- c. WWD shall be responsible, as determined by DWR, for any adverse impacts to the SWP or its long-term water contractors, including but not limited to damages to the Aqueduct from subsidence and water quality impacts that may result from the local groundwater pumping into the Aqueduct or conveyance of local groundwater to turnouts within Reaches 4-7.

8. WATER DELIVERY SCHEDULES

- a. DWR shall accept and convey WWD local groundwater inflow in accordance with a schedule which has been reviewed and approved by DWR. DWR's approval is dependent upon the times and amounts of the delivery and the overall delivery capability of the SWP. DWR shall not be obligated to deliver the water at times when such delivery would adversely impact SWP operations, facilities, or other SWP contractors.
- b. WWD shall submit revised monthly water delivery schedules for approval to the State Water Project Analysis Office, Water Deliveries Section, indicating timing and point of delivery requested under to this Agreement with reference to SWPAO #14010. Revised schedules shall be sent by electronic mail to SWPDeliveries@water.ca.gov or by FAX to (916) 653-9628, Attention: Chief, Water Deliveries Section.
- c. WWD shall submit weekly schedules for the pump-in, conveyance and delivery of WWD's local groundwater under this Agreement to the San Luis Field Division, Water Operations Section, indicating timing and point of delivery requested with reference to SWPAO #14010. Schedules shall be sent by electronic mail to slwtrops@water.ca.gov or by FAX to (209) 826-3446, Attention: Chief, Water Operations Section.
- d. WWD shall submit all weekly water schedules described above by 10:00 a.m. Wednesday, for the following week, Monday through Sunday, to the appropriate field division Water Operations Section for the SWP contractor.
- e. WWD shall also concurrently send weekly water schedules by electronic mail or fax to the State Water Project Operations Control Office:
 - (i) Water Management Branch

Water_deliv_sched@water.ca.gov FAX to (916) 574-2785

Attention: Chief, Water Management Branch

(ii). Power Management and Optimization Branch

Water_deliv_sched@water.ca.gov

FAX to (916) 574-2785

Attention: Chief, Power Management and Optimization Branch

(iii). Pre-Scheduling Section

Presched@water.ca.gov

FAX to (916) 574-2782

Attention: Chief, Pre-Scheduling Section

9. CHARGES

WWD shall pay to DWR for all services provided by DWR related to this Agreement, including but not limited to:

- A one-time Agreement Preparation Fee of \$10,000 to cover DWR's costs for the development, preparation and execution of this Agreement;
- b. A Monthly Administrative Fee of \$700 to cover DWR's costs to administer the Agreement, maintain records, and prepare monthly billings. This fee shall be charged beginning in the month when DWR first accepts local groundwater into the Aqueduct and will be charged each month during pump-in, conveyance or delivery of local groundwater to WWD and until all mitigation water has been accepted by DWR, or this Agreement is terminated.
- c. WWD agrees to pay direct costs incurred by DWR as a result of providing services under this Agreement which otherwise would not have been performed in absence of this Agreement. These costs include, but are not limited to water quality testing, meter calibration, water measurements, and personnel costs of staff time and travel.
- d. A Use-of Facilities fee of \$7.33 per acre-foot for conveyance of local groundwater to turnouts in Reaches 4-7 of the Aqueduct.
- e. In addition to the charges identified above, WWD agrees to pay to DWR any additional identified demonstrable increases in cost that would otherwise be borne by DWR or by the SWP contractors not signatory to this Agreement as a result of DWR providing service under this Agreement.
- f. All payments shall be due within 30 days after the date of DWR's invoice. Interest shall be charged for all delinquent payments. WWD shall pay to DWR accrued interest on all overdue payments at the rate of 1 percent per month from the due date to the date of payment.

10. COMPLIANCE WITH APPLICABLE LAWS AND OBTAINING APPROVALS

a. The pump-in, conveyance and delivery of WWD's local groundwater under this Agreement shall be contingent on, and subject to, any necessary approvals and shall be governed by the terms and conditions of such approval(s) and any other applicable regulation in effect at the time of delivery. WWD shall be responsible for complying with all applicable laws and regulations and for securing any required consent, permit, or order.

 Pursuant to the Governor's Executive Order of April 25, 2014, DWR's responsibilities under CEQA have been temporarily suspended for actions to move water to areas of need.

11. LIABILITY

- a. DWR is not responsible for the use, effects, or disposal of WWD's local groundwater from source wells prior to introduction into the Aqueduct or after the water passes through WWD's turnouts in Reaches 4-7 of the California Aqueduct. Responsibility under the terms of this Agreement shifts from DWR to WWD when the local groundwater passes through WWD's turnouts.
- b. WWD agrees to defend and hold DWR, its officers and employees, harmless from any direct or indirect loss, liability, lawsuit, cause of action, judgment or claim, and shall indemnify DWR, its officers and employees, for all lawsuits, costs, damages, judgments, attorneys fees, and liabilities that DWR, its officers and employees incur as result of DWR providing services to WWD under this Agreement, except to the extent resulting from the sole negligence or willful misconduct of DWR.
- c. If uncontrollable forces preclude DWR from accepting or delivering water from or to WWD under this Agreement, either partially or completely, then DWR is relieved from the obligation to deliver the water under this Agreement to the extent that DWR is reasonably unable to complete the obligation due to the uncontrollable force. Uncontrollable forces shall include, but are not limited to earthquakes, fires, tornadoes, floods, and other natural or human caused disasters. WWD shall not be entitled to recover any administrative costs or other costs incurred under this Agreement if uncontrollable forces preclude DWR from delivering the water.
- d. The performance of the parties to this Agreement is contingent upon approval of all governmental agencies with jurisdiction over approval of this Agreement, including without limitation any necessary compliance with applicable environmental laws. If unforeseen conditions prohibit completion of deliveries herein, after partial deliveries are made hereunder, this Agreement will be treated as though rescinded except for responsibilities for liabilities and water already delivered. Unforeseen conditions include, but are not limited to, failure of approvals or withdrawal of approval by any governmental agency with jurisdiction over this Agreement or administrative order with respect thereto.

12. DISPUTE RESOLUTION

In the event of dispute regarding interpretation or implementation of this Agreement, the Director of DWR and general manager of WWD shall endeavor to resolve the dispute by meeting within 30 days after the request of a Party. If the dispute is unresolved, the Parties shall use the services of a mutually acceptable consultant in an effort to resolve the dispute. Parties involved in the dispute shall share the fees and expenses of the consultant equally. If a consultant cannot be agreed upon, or if the consultant's recommendations are not acceptable to the Parties, and unless the Parties otherwise agree, the matter may be resolved by litigation and any Party may at its option pursue any available legal remedy, including, but not limited to, injunctive and other equitable relief.

ASSIGNMENT OF AGREEMENT

Without the prior written consent of DWR and WWD, this Agreement shall not be assignable by WWD in whole or in part.

MODIFICATION OF AGREEMENT

No modification of the terms and conditions of this Agreement shall be valid unless made in writing and signed by the Parties to this Agreement.

15. PARAGRAPH HEADINGS

The paragraph headings of this Agreement are for the convenience of the Parties and shall not be considered to limit, expand, or define the contents of the respective paragraphs.

TERMS TO BE REASONABLE

Where the terms of this Agreement provide for actions to be based upon the opinion, judgment, approval, review, or determination of any party, such terms are to be construed as providing that such opinion, judgment, approval, review, or determination be reasonable.

17. SIGNATURE CLAUSE

The signatories represent that they have appropriate authorization to enter into this Agreement on behalf of the Party for whom they sign. A copy of any resolution or other documentation authorizing WWD to enter into this Agreement, if such resolution or authorization is required, shall be provided to DWR.

18. EXECUTION IN COUNTERPART

This Agreement may be executed in counterpart. The Parties agree to accept facsimile or electronically scanned signatures as original signatures. The Agreement shall take effect as soon as both Parties have signed. Immediately after execution, WWD shall transmit a copy of the executed Agreement by facsimile or electronic file to Robert B. Cooke, Chief, State Water Project Analysis Office at (916) 653-9628 or swpao-chief@water.ca.gov.

IN WITNESS WHEREOF, the Parties hereto have entered into this Agreement

Approved as to legal form and sufficiency	STATE OF CALIFORNIA DEPARTMENT OF WATER RESOURCES
Chief Counsel Department of Water Resources 7-//- 2019 Date	Carl A. Torgersen Deputy Director Date
WESTLANDS WATER DISTRICT	
Name	
Title	
Date	

cc: Mr. Terry Erlewine, General Manager State Water Contractors 1121 L Street, Suite 1050 Sacramento, California 95814

18. EXECUTION IN COUNTERPART

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IN WITNESS WHEREOF, the Parties hereto have entered into this Agreement

Approved as to legal form and sufficiency	STATE OF CALIFORNIA DEPARTMENT OF WATER RESOURCES
Chief Counsel Department of Water Resources	Carl A. Torgersen Deputy Director
Date	Date
WESTLANDS WATER DISTRICT Name	
CHIEF OPERATING OFFICER Title JULY 10, 2014 Date	

cc: Mr. Terry Erlewine, General Manager State Water Contractors 1121 L Street, Suite 1050 Sacramento, California 95814

ATTACHMENT 1 TABLE 1

MCLs, DLRs, and PHGs for Regulated Drinking Water Contaminants (Units are in milligrams per liter (mg/L), unless otherwise noted.) Last Update: July 1, 2014

This table includes:

California's maximum contaminant levels (MCLs)

Detection limits for purposes of reporting (DLRs)

<u>Public health goals (PHGs) from the Office of Environmental Health Hazard Assessment (OEHHA)</u>

Also, PHGs for NDMA and 1,2,3-Trichloropropane (which are not yet regulated) are included at the bottom of this table.

	MCL	DLR	PHG	Date of PHG
Chemicals with MCLs in 22 (CCR §64431	—Inorgan	ic Chemicals	5
Aluminum	1	0.05	0.6	2001
Antimony	0.006	0.006	0.02	1997
Antimony	**		0.0007	2009 draft
Arsenic	0.010	0.002	0.000004	2004
Asbestos (MFL = million fibers per liter; for fibers >10 microns long)	7 MFL	0.2 MFL	7 MFL	2003
Barium	1	0.1	2	2003
Beryllium	0.004	0.001	0.001	2003
Cadmium	0.005	0.001	0.00004	2006
Chromium, Total - OEHHA withdrew the 0.0025-mg/L PHG	0.05	0.01	withdrawn Nov. 2001	1999
Chromium, Hexavalent	0.010	0.001	0.00002	2011
Cyanide	0.15	0.1	0.15	1997
Fluoride	2	0.1	1	1997
Mercury (inorganic)	0.002	0.001	0.0012	1999 (rev2005)*
Nickel	0.1	0.01	0.012	2001
Nitrate (as NO3)	45	2	45	1997
Nitrite (as N)	1 as N	0.4	1 as N	1997
Nitrate + Nitrite	10 as N	200,000	10 as N	1997
Perchlorate	0.006	0.004	0.006	2004
Perchlorate	min ress.	: 	0.001	2012 draft
Selenium	0.05	0.005	0.03	2010
Thallium	0.002	0.001	0.0001	1999 (rev2004)

Copper and Le	ad, 22 CCR	§64672.3		
Values referred to as MCLs for lead and called "Action Levels" u	4, 411		*.	ad, they are
Copper	1.3	0.05	0,3	2008
Lead	0.015	0.005	0.0002	2009
Radionuclides with MCLs in 22 C	CR §64441	and §6444	13—Radioad	tivity
[units are picocuries per liter (pCi/L), u	inless otherw	/ise stated;	n/a = not ap	plicable]
Gross alpha particle activity - OEHHA concluded in 2003 that a PHG was not practical	15	3	none	n/a
Gross beta particle activity - OEHHA concluded in 2003 that a PHG was not practical	4 mrem/yr	4	none	n/a
Radium-226 + Radium-228	5			
Strontium-90	8	2	0.35	2006
Tritium	20,000	1,000	400	2006
Uranium	20	1	0.43	2001
(a) Volatile Orga	nic Chemic	als (VOCs	0.00015	2001
Carbon tetrachloride	0.0005	0.0005	0.0001	2000
1,2-Dichlorobenzene	0.6	0.0005	0.6	1997 (rev2009)
1,4-Dichlorobenzene (p-DCB)	0.005	0.0005	0.006	1997
1,1-Dichloroethane (1,1-DCA)	0.005	0.0005	0.003	2003
1,2-Dichloroethane (1,2-DCA)	0.0005	0.0005	0.0004	1999 (rev2005)
1,1-Dichloroethylene (1,1-DCE)	0.006	0.0005	0.01	1999
cis-1,2-Dichloroethylene	0.006	0.0005	0.1	2006
trans-1,2-Dichloroethylene	0.01	0.0005	0.06	2006
Dichloromethane (Methylene chloride)	0.005	0.0005	0.004	2000
1,2-Dichloropropane	0.005	0.0005	0.0005	1999
1,3-Dichloropropene	0.0005	0.0005	0.0002	1999 (rev2006)
Ethylbenzene	0.3	0.0005	0.3	1997
Methyl tertiary butyl ether (MTBE)	0.013	0.003	0.013	1999
Monochlorobenzene	0.07	0.0005	0.07	2014
Styrene	0.1	0.0005	0.0005	2010
1,1,2,2-Tetrachloroethane	0.001	0.0005	0.0001	2003
Tetrachloroethylene (PCE)	0.005	0.0005	0.00006	2001
Toluene	0.15	0.0005	0.15	1999
1,2,4-Trichlorobenzene	0.005	0.0005	0.005	1999

1,1,1-Trichloroethane (1,1,1-TCA)	0.2	0.0005	1	2006
1,1,2-Trichloroethane (1,1,2-TCA)	0.005	0.0005	0.0003	2006
Trichloroethylene (TCE)	0.005	0.0005	0.0017	2009
Trichlorofluoromethane (Freon 11)	0.15	0.005	1.3	2014
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.2	0.01		1997
(Freon 113)	1.2	0.01	4	(rev2011)
Vinyl chloride	0.0005	0.0005	0.00005	2000
Xylenes	1.75	0.0005	1.8	1997
(b) Non-Volatile Synthet	ic Organic	Chemicals	(SOCs)	
Alachlor	0.002	0.001	0.004	1997
Atrazine	0.001	0.0005	0.00015	1999
Bentazon	0.018	0.002	0.2	1999 (rev2009)
Benzo(a)pyrene	0.0002	0.0001	0.000007	2010
Carbofuran	0.018	0.005	0.0017	2000
Chlordane	0.0001	0.0001	0.00003	1997 (rev2006)
Dalapon	0.2	0.01	0.79	1997 (rev2009)
1,2-Dibromo-3-chloropropane (DBCP)	0.0002	0.00001	0.0000017	1999
2,4-Dichlorophenoxyacetic acid (2,4-D)	0.07	0.01	0.02	2009
Di(2-ethylhexyl)adipate	0.4	0.005	0.2	2003
Di(2-ethylhexyl)phthalate (DEHP)	0.004	0.003	0.012	1997
Dinoseb	0.007	0.002	0.014	1997 (rev2010)
Diquat	0.02	0.004	0.015	2000
Endrin	0.002	0.0001	0.0018	1999 (rev2008)
Endothal	0.1	0.045	0.094	2014
Ethylene dibromide (EDB)	0.00005	0.00002	0.00001	2003
Glyphosate	0.7	0.025	0.9	2007
Heptachlor	0.00001	0.00001	0.000008	1999
Heptachlor epoxide	0.00001	0.00001	0.000006	1999
Hexachlorobenzene	0.001	0.0005	0.00003	2003
Hexachlorocyclopentadiene	0.05	0.001	0.002	2014
Lindane	0.0002	0.0002	0.000032	1999 (rev2005)
Methoxychlor	0.03	0.01	0.00009	2010
Molinate	0.02	0.002	0.001	2008
Oxamyl	0.05	0.02	0.026	2009
Pentachlorophenol	0.001	0.0002	0.0003	2009
Picloram	0.5	0.001	0.5	1997
Polychlorinated biphenyls (PCBs)	0.0005	0.0005	0.00009	2007
Simazine	0.004	0.001	0.004	2001

2,4,5-TP (Silvex)	0.05	0.001	0.003	2014
2,3,7,8-TCDD (dioxin)	3x10 ⁻⁸	5x10 ⁻⁹	5x10 ⁻¹¹	2010
Thiobencarb	0.07	0.001	0.07	2000
Toxaphene	0.003	0.001	0.00003	2003

^{*}OEHHA's review of this chemical during the year indicated (rev20XX) resulted in no change in the PHG.

^{**}The DLR for Bromate is 0.0010 mg/L for analysis performed using EPA Method 317.0 Revision 2.0, 321.8, or 326.0.

Attachment Table Modified Title 22 Secondary Maximum Contaminant Levels (Title 22 Table 64449-A)

Constituent	Units	Maximum Contaminant Level
Secondary		
Aluminum	mg/L	0.2
Chloride	mg/L	250
Copper	mg/L	1
Iron	mg/L	0.3
Manganese	mg/L	0.05
Silver	mg/L	0.1
Zinc	mg/L	5

DEPARTMENT OF WATER RESOURCES WATER QUALITY POLICY AND IMPLEMENTATION PROCESS FOR ACCEPTANCE OF NON-PROJECT WATER INTO THE STATE WATER PROJECT

It is the Department of Water Resources (DWR) policy to assist with the conveyance of water to provide water supply, and to protect the State Water Project (SWP) water quality within the California Aqueduct. To facilitate this policy DWR provides the following implementation process for accepting non-project water into the SWP (Policy). For purposes of this document, SWP and California Aqueduct are interchangeable and the same.

POLICY PROVISIONS

DWR shall consider and evaluate all requests for Non-Project (NP) water input directly into the SWP conveyance facilities based upon the criteria established in this document. NP water shall be considered to be any water input into the SWP for conveyance by the SWP that is not directly diverted from the Sacramento-San Joaquin Delta or natural inflow into SWP reservoirs.

The proponent of any NP water input proposal shall demonstrate that the water is of consistent, predictable, and acceptable quality.

DWR will consult with State Water Project (Contractors), existing NP participants and the Department of Public Health (DPH) on drinking water quality issues relating to NP water as needed to assure the protection of SWP water quality.

Nothing in this document shall be construed as authorizing the objectives of Article 19 of the SWP water supply contracts or DPH drinking water maximum contaminant levels to be exceeded.

This Policy shall not constrain the ability of DWR to operate the SWP for its intended purposes and shall not adversely impact SWP water deliveries, operation or facilities.

EVALUATING NP WATER PROPOSALS

DWR shall use a two-tiered approach for evaluating NP water for input into the California Aqueduct.

NP Tier 1

Tier 1 NP pump-in proposals (PIP) shall exhibit water quality that is essentially the same, or better, than what occurs in the California Aqueduct. PIP's considered to be tier 1 shall be approved by DWR (see baseline water quality tables 1 through 4).

NP Tier 2

Tier 2 PIP's are those that exhibit water quality that is different and possibly worse than in the California Aqueduct and/or have the potential to cause adverse impacts to the Contractors. Tier 2 PIP's shall be referred to a NP Facilitation Group (FG), which would review the project and if needed make recommendations to DWR in consideration of the PIP.

SWC Facilitation Group

This advisory group consists of representatives from each Contractor that chooses to participate and DWR. The group shall review tier 2 PIP's based on the merits, impacts, mitigation, water quality monitoring, cost/benefits or other issues of each PIP and provide recommendations to DWR. Upon initial review of tier 2 PIP by DWR, it shall then be submitted to the FG for review. A consensus recommendation from the FG would be sought regarding approval of the PIP. DWR shall base its decision on the merits of the PIP, recommendations of the FG and the PIP's ability to provide overall benefits to the SWP and the State of California.

Blending Water Sources

Blending of multiple water sources prior to inflow into the SWP is acceptable and may be preferred depending upon water quality of the PIP. Blending of water in this manner may be used to quality a project as NP Tier 1.

Mixing (blending) within the California aqueduct can be considered but shall not be adjacent to municipal and industrial (M&I) delivery locations. PIP's that are coordinating water discharged to maintain or improve SWP water quality are an example of the mixing approach. The PIP shall demonstrate by model or an approach acceptable to DWR and the FG that the water is adequately mixed before reaching the first M&I customer. Generally NP PIP's that involve mixing with SWP water shall be considered NP Tier 2.

Baseline Water Quality

To aid in developing and evaluating PIP's both historical and current SWP water quality levels shall be considered. A representative baseline water quality summary is shown in Tables 1 through 4, using historical SWP water quality records at O'Neill Forebay.

NP IMPLEMENTATION PROCESS

Project Proposals

The NP project proponent requesting to introduce water into the SWP shall submit a detailed PIP to DWR. The proponent shall demonstrate that the NP water is of

consistent, predictable and reliable quality, and is responsible for preparing and complying with any and all contracts, environmental documents, permits or licenses that are necessary consistent with applicable laws, regulations, agreements, procedures, or policies.

Project Description

The proponent will submit to DWR a PIP describing the proposed program, identifying the water source(s), planned operation, characterizing the inflow water quality and any anticipated impacts to SWP water quality and/or operations. The PIP should be submitted at least one month prior to proposed start up to allow for DWR and FG review. The PIP shall include:

Project proponent names, locations, addresses, and contact person(s).
Maps identifying all sources of water, point of inflow to the SWP and ultimate
fate of the introduced water.
Terms and conditions of inflow, timing, rates and volumes of inflow, pumping,
conveyance and storage requirements.
Construction details of any facilities located adjacent to the SWP including
valves, meters, and pump and piping size.
All potential impacts and/or benefits to downstream SWP water contractors.
Detailed water quality data for all sources of water and any blend of sources that
will be introduced into the SWP.
Identify anticipated water quality changes within the SWP.
Identify other relevant environmental issues such as subsidence, ground water
overdraft or, presents of endangered species.
Provide performance measures and remedial actions that will be taken in the
event projected SWP water quality levels are not met.
Reference an existing contract or indicate that one is in process with DWR to
conduct a PIP.

Water Quality Monitoring

In order to demonstrate that the water source(s) are of consistent, predictable, and acceptable quality the NP proponent shall monitor water quality. The proponent shall, for the duration of the program, regularly report on operations as they affect water quality, monitoring data and water quality changes. Both DPH title 22 and a short list of Constituents of Concern (COC) shall be monitored for based upon one of the following water quality monitoring options.

<u>Constituents of Concern</u> Current COC are Arsenic, Bromide, Chloride, Nitrate, Sulfate, Organic Carbon, and Total Dissolved Solids. These COC's may be changed as needed.

<u>Water Quality Monitoring Options</u> NP proponents shall select one of the testing options below and perform all water quality testing and provide analytical results in

a timely manner as described herein. Monitoring shall be conducted for initial well start-up, periodic well re-testing and on-going testing during operation. Well data should be no more than three years old. Title 22 results should be provided to DWR and the FG within two weeks of testing and COC results within one week of testing, unless other schedules are agreed upon by DWR and the FG.

Option 1 - Baseline tests for Individual Wells

Well Start-up: Title 22 tests are required for all wells participating in the program prior to start-up. An existing title 22 test that is no more than three years old may be used. A Title 22 test may be substituted for any well near a similar well with a Title 22 test of record.

Well Re-testing: Title 22 test for all wells participating every three years.

Ongoing Monitoring: COC tests are required for all discharge locations to the SWP at start up and quarterly thereafter for new programs and resumption of established programs. New programs or those with constituents that may potentially degrade the SWP shall conduct at least weekly COC sampling of all discharge locations until the proponent demonstrates that the NP water is of consistent, predictable and reliable quality. Once the nature of the discharge has been clearly established, the COC tests are required quarterly for each discharge point.

Option 2 - Baseline tests for Representative Wells

Well Start-up: COC tests of record are required for all wells participating in the program and Title 22 tests of record are required for representative wells comprising a subset of all wells. This would typically be a group of wells that are manifold together and discharge to one pipe. Representative wells shall be identified on a case-by-case basis to be representative of the manifold area, well proximity, and water levels.

Well Re-testing: Same as required in Option 1.

On-going Monitoring: COC tests are required for all discharge locations to the SWP at start up and monthly thereafter for the duration of the program and annually at each well. New programs or those with constituents that may potentially degrade the SWP shall conduct weekly COC sampling of all discharge locations until_the proponent demonstrates that the NP water is of consistent, predictable and reliable quality.

Option 3 – Self Directed

A PIP may propose a water quality monitoring program for approval by DWR and the FG that is different from options 1 or 2. It must include COC and title 22 testing

that will fully characterize water pumped into the SWP and be at an interval to show a consistent, predictable and reliable quality.

Analytical Methods

Analytical laboratories used by project proponents shall be DPH certified by the Environmental Laboratory Accreditation Program (ELAP) and use EPA prescribed and ELAP accredited methods for drinking water analysis. Minimum Reporting Levels must be at least as low as the DPH required detection limits for purposes of reporting (DLR). The current DLRs are listed on the DPH website at http://www.cdph.ca.gov/certlic/drinkingwater/Pages/MCLsandPHGs. DWR shall continue to use Bryte Chemical Laboratory as it's analytical and reference lab.

Flow Measurements

The project proponent shall maintain current, accurate records of water production rate and volume from each source, as well as, each point of discharge into the SWP. All flow measurements shall be submitted to regularly to DWR.

RECONSIDERATION

If an NP proponent disagrees with the FG or DWR decision or feels that there is an overriding benefit of the proposal, the proponent may request reconsideration from DWR on the basis of overriding public benefit or water supply deficiency. DWR shall consider these requests on a case-by-case basis.

ONGOING PROGRAM

Any NP Proponent who has successfully established a NP water inflow program (Including existing Kern Fan Banking Projects, Kern Water Bank, Pioneer and Berrenda Mesa Projects, Semitropic Water Storage District Wheeler Ridge Mariposa Water Storage District and Arvin Edison Water Storage District) may reinitiate the program by notifying DWR at least ten days before inflow is scheduled to begin and provide the following information:

Updated water quality data and/or updated modeling that adequately reflects
the quality of water to be introduced into the SWP.
Turn-in location.
Expected rate and duration of inflow. DWR shall notify the FG of this
reinitiating of inflow.
Water quality monitoring schedule that meets the objective of this policy.

FUTURE NP PROGRAMS

Future NP projects should be planned and designed considering the following items:

Projects involving water quality exceeding primary drinking water standards
shall show that the water shall be treated or blended before it enters the
SWP to prevent water quality impacts.
The project proponent of a Tier 2 proposal should clearly identify and
establish that water inflow shall be managed and operated such that poor
quality water will be blended with better quality water so that SWP water
quality will not be degraded upon acceptable levels as determined by the FG
and DWR.
If a significant water supply deficiency exists and it is recommended by the
FG that raw water quality criteria be set aside to ensure adequate supply,
such action shall be subject to approval by the DPH.
The project proponent of a NP inflow program which degrades SWP water
quality shall identify mitigation to downstream water contractors for water
quality impacts associated with increased water supply or treatment costs.

DWR ROLE

DWR shall seek, as needed, DPH or SWC recommendations on changes or additions to this document governing the NP water quality projects. The FG shall review proposed changes or additions prior to implementation by DWR, as needed.

DWR and or the United States Bureau of Reclamation (for San Luis Canal inflow) shall have ultimate responsibility for approving the water quality of all NP inflow, as well as, the oversight of monitoring and tracking the water quality of operating programs. DWR shall also ensure that the proponents of the NP inflow program perform according to their proposals, and will take appropriate action in the event of non-conformance.

Project Proposal Review Process

Upon receipt of a proposal for PIP, DWR shall review it for adequacy. DWR shall consider all PIPs based upon these guidelines. Review shall take no more than one month after receiving a complete program proposal. If necessary, DWR will convene timely meetings with the FG during the review. At a minimum the review will include

Examination of all documents and data for completeness of the PIP.
Notification of the affected Field Divisions, and the FG has been received by
DWR.
Consideration by DWR of comments from all parties before the final decision.
Upon completion of the review DWR will notify the proponent and FG of the
acceptance of the PIP or explain the reason(s) for rejecting it.
DWR may reconsider a decision on a PIP based upon a recommendation from
the FG. Reconsideration by DWR will be on a case-by-case basis.

Periodic Review

DWR may schedule periodic reviews of each operating NP inflow with input from the FG. As part of the review, program proponents shall provide the following information:

	Summary of deliveries to the Aqueduct.
	Water quality monitoring results.
	Proposed changes in the program operation.
	ew may result in changes in monitoring and testing required of the program nt as a result of;
	New constituents being added to the EPA /DPH list of drinking water standards.
	Changes in the maximum contaminant levels for the EPA/DPH list of drinking water standards.
	Identification of new constituents of concern.
	Changes in the water quality provided by the program.
	Changes in constituent background levels in the California Aqueduct.
•	cedure shall recognize emerging contaminants and/or those detrimental to

This procedure shall recognize emerging contaminants and/or those detrimental to agricultural viability as they are identified by the regulatory agencies and shall set appropriate standards for water introduction based upon ambient levels in the California Aqueduct or State Notification Levels. Emerging contaminants are those that may pose significant risk to public health, but as yet do not have an MCL. Currently the Office of Environmental Health Hazard Assessment and the DPH establish Public Health Goals and Notification Levels, respectively. These levels, though not regulated, do provide health-based guidance to water utilities and can require public notification if exceeded.

Water Quality Review

DWR shall track and periodically report to the FG on water quality monitoring results on the SWP from NP water inflow and make all water quality data available to the public upon request.

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The state of the s	DWR shall review analyze and maintain all records of water quality testing conducted by the proponent of the well(s), source(s) and discharge(s) into the SWP.
	DWR shall determine what additional water quality monitoring, if any, is necessary within the SWP to ensure adequate protection of SWP water quality. DWR shall conduct all water quality monitoring within the SWP.
	DWR may prepare periodic reports of NP projects.

On-site Surveillance

Department of Water Resources

The appropriate Field Division within DWR will be responsible for review and approval of all construction activities within the SWP right-of-way. Plans showing the discharge system piping, valves, sampling point, meters and locations must be submitted and approved prior to any construction. In addition, the appropriate Field Division will be responsible for confirmation of all meter readings and water quality monitoring conducted by the proponent.

	Field division staff may visit, inspect, and calibrate meters and measure flow conditions at each source or point of inflow into the SWP. Flow meters, sampling ports and anti-siphon valves must be conveniently located near the SWP right-of-way. Field division staff may collect water samples at each source or point of discharge into the SWP. The appropriate Field Division shall conduct additional water quality monitoring within the SWP, if deemed necessary, to assure compliance with the NP Inflow Criteria. DWR shall monitor aqueduct water quality and analyze several "split samples" of the water at the point of introduction into the aqueduct to ensure consistent analytical results.								
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Table A1 HISTORICAL WATER QUALITY CONDITIONS 1988 TO 2011 AT O'NEILL FOREBAY OUTLET (mg/L)

Parameter	Mean	Min.	Max.	Std. Dev.
Aluminum	0.03	0.01	0.527	0.05
Antimony	0.002	0.001*	0.005	0.002
Arsenic	0.002	0.001	0.004	0.001
Barium	0.05	0.05	0.068	0.002
Beryllium	0.001*	0.001*	0.001*	0.000
Bromide	0.22	0.04	0.54	0.16
Cadmium	0.003	0.001	0.005	0.002
Chromium	0.004	0.001	0.011	0.002
Copper	0.004	0.001	0.028	0.003
Fluoride	0.1	0.1	0.5	0.1
Iron	0.037	0.005	0.416	0.050
Manganese	0.009	0.005	0.06	0.007
Mercury	0.001	0.0002	0.001	0.0004
Nickel	0.001	0.001	0.004	0.0005
Nitrate	2.9	0.2	8.1	1.6
Selenium	0.001	0.001	0.002	0.0001
Silver	0.003	0.001	0.005	0.002
Sulfate	42	14	99	15
Total Organic Carbon	4.0	8.0	12.6	1.6
Zinc	0.007	0.005	0.21	0.01

^{*}These values represent reporting limits. Actual values would be lower

Table A2 O'Neill Forebay Outlet Total Dissolved Solids Criteria by Water Year Classification, 1988-2011 (mg/L)

Year Type	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Wet	227.2	262.5	295.4	228.9	213.8	231.2	184.4	226.5	181.5	171.4	195.7	157.3
Near Normal	317.9	324.7	351.7	295.4	268.1	302.7	270.0	285.1	230.1	211.9	170.9	202.6
Dry	286.4	319.6	370.0	362.0	344.2	305.2	240.4	278.2	307.3	234.8	269.0	336.6
Critical	256.6	312.9	372.9	367.0	361.0	335.0	307.1	291.8	335.1	325.7	339.4	328.8

^{*} Year type is based on water year classification. Below normal and above normal year types have been combined into one designation called "near normal."

Table A3 O'Neill Forebay Outlet Bromide Criteria by Water Year Classification, 1988-2011 (mg/L)

Year Type	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Wet	0.19	0.24	0.28	0.13	0.10	0.12	0.12	0.17	0.12	0.12	0.13	0.10
Near Normal	0.31	0.31	0.34	0.21	0.15	0.15	0.18	0.22	0.15	0.15	0.14	0.19
Dry	0.25	0.29	0.35	0.35	0.24	0.20	0.17	0.24	0.27	0.13	0.29	0.41
Critical	0.26	0.28	0.32	0.37	0.33	0.27	0.22	0.22	0.28	0.28	0.32	0.37

^{*} Year type is based on water year classification. Below normal and above normal year types have been combined into one designation called "near normal."

Table A4O'Neill Forebay Outlet Total Organic Carbon Criteria by Water Year Classification, 1988-2011 (mg/L)

Year Type [*]	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Wet	2.8	2.9	3.9	5.2	4.8	3.8	3.9	3.4	3.1	3.2	3.1	2.7
Near Normal	3.7	4.1	4.0	7.0	6.3	5.6	4.7	4.4	4.0	3.3	3.3	3.4
Dry	3.0	3.0	4.0	5.7	4.8	5.7	4.5	3.6	3.7	2.9	2.9	2.7
Critical	2.8	3.1	3.3	4.9	6.0	5.7	4.7	4.0	3.8	3.9	4.0	3.5

^{*} Year type is based on water year classification. Below normal and above normal year types have been combined into one designation called "near normal."